

Sub B3
slider can include a transversely aligned pressure relief trench which may be opened at opposed ends thereof to form a through channel. The slider can include a longitudinally aligned pressure relief trench, a sloped pressure relief trench, and a plurality of spaced pressure relief trenches. The slider can include opposed side rails and the side rails include a pressure relief trench. The trench can include a depth dimension sized so that separation of the slider and disc at the trench during contact of the slider with the disc surface is equal to or greater than $2R_c$ to balance capillary pressure and disjoining pressure of a lubricant fluid on the disc surface. The trench can be sized to provide a slider-disc interface in the toe-dipping regime. A slider for supporting transducer elements for a data storage system includes a rigid member having opposed leading and trailing edges and opposed upper and lower surfaces. The lower surface includes raised bearing surfaces and the trailing edge is adapted to support a transducer element. Landing pads extend from a bearing surface and are adapted to define a contact interface with a disc surface. Pressure relief means proximate a contact interface position between the trailing edge of the slider and disc surface to reduce capillary pressure of the meniscus to limit area of the meniscus.

IN THE CLAIMS

Please amend claims 21 and 22 as follows:

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21. (Amended) A slider for supporting a transducer element for a data storage system comprising:

a rigid member including opposed leading and trailing edges and opposed upper and lower surfaces, the lower surface including an air bearing surface;

landing pads extending from the air bearing surface and spaced from the trailing edge of the rigid member such that the rigid member tilts about an axis

BH defined by the pads to thereby cause the trailing edge to approach a disc surface; and

at least one pressure relief trench formed in the air bearing proximate to the trailing edge of the rigid member and spaced from the landing pads to reduce capillary pressure and area of a meniscus due to a disc lubricant proximate to the trailing edge of the rigid member caused by tilt of the rigid member.

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2/2. (Amended) The slider of claim 1 wherein the air bearing surface includes a center rail and the center rail includes a pressure relief trench.

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